

## **Consortium for Site Characterization Technology**

Developers face many problems moving new site characterization and monitoring technologies from prototype to routine use. These include convincing regulators and customers the product meets its claims; lack of credible performance data; access to unbiased third parties to evaluate the data; and identifying test sites. The government's interest in achieving national environmental goals faster, better, and less expensively warranted a united effort to address these problems.

The **Consortium** is a partnership between the DoD, DOE, EPA, and the private sector whose goal is to increase the use of innovative characterization technologies in assessing contaminated sites. The CSCT will identify, demonstrate, evaluate, verify and transfer information about innovative and alternative monitoring, measurement, and site characterization technologies to developers, users, and regulators.

### **How does the Process Work?**

The **Consortium** is designed around a series of guidance manuals which define how a demonstration will be conducted and how the data will be evaluated. The developer is expected to make use of these documents by working with the Consortium staff to develop an acceptable demonstration plan. The purpose of the demonstration plan is to design a field exercise that will allow the performance claims for the technology to be evaluated in an objective and scientifically sound manner. The developer will be expected to conduct the demonstration at suitable field sites. The Consortium will support the developer in selecting the sites, approving the demonstration plan, and auditing the demonstration. The Consortium will also provide for data interpretation and report preparation, and issue a verification statement through EPA.

## **Portable Gas Chromatograph/ Mass Spectrometers (GC/MS)**

**What it is:** GC/MS is the EPA recommended method for the analysis of volatile and semivolatile organic compounds. This proven analytical technique identifies and quantifies organic compounds on the basis of molecular weight, characteristic fragmentation patterns, and retention time. Until recently, it was not feasible to bring the GC/MS instrument to a hazardous waste site because of its size and weight, the need for strict control of temperature and humidity, and the effect of vibration during transport. Mobile/field-portable GC/MS is anticipated to become a major technology for field analysis of these contaminants in the 1990s.

### **When/where demonstrated:**

**Aiken, SC**

**July 10-14, 1995**

(DOE's Savannah River site)-- Area along an abandoned process sewer line for non-radioactive waste. The primary contamination is from chlorinated VOCs.

**Oscoda, MI**

**September 11-15, 1995**

This 7.5 square mile site is at a decommissioned Air Force Strategic Air Command Base. Typically, the contamination included landfill leachate, gasoline, JP-4 fuel, leaky USTs, and pesticides.

### **Who participated:**

- Bruker-Franzen Analytical
- Teledyne Electronic
- Viking Instruments Corp.

For more information on the Consortium contact:

EPA-542-F-96-009c

April 1996

Mr. Eric Koglin/Dr. Steve Billets  
EPA National Exposure Research Laboratory  
Characterization Research Division  
P. O. Box 93478  
Las Vegas, Nevada 89193-3478  
702-798-2432 fax 798-2261  
702-798-2232 fax 798-2261  
Internet:koglin.eric@wpmail.las.epa.gov  
Internet:billets.stephen@wpmail.las.epa.gov

Mr. Daniel Powell  
EPA Technology Innovative Office (5102G)  
401 M Street, SW  
Washington, DC 20460  
703-603-7196; fax 603-9135  
Internet:powell.dan@epamail.epa.gov

# Technology Verification Program

## Portable Gas Chromatograph/ Mass Spectrometers (GC/MS)

The Consortium for Site Characterization Technology is supported by the Environmental Technology Initiative and Strategic Environmental Research and Development Program.

